

REMARKS

Claims 15 to 34 are pending in the present application.

In view of the following, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Claims 15 to 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over WIPO publication No. WO 00/78038 to Szeliski ("Szeliski") in view of U.S. Patent No. 5,812,286 ("Lin").

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

The Szeliski reference concerns a system and method for manipulating a set of images of a static scene captured at different exposures (i.e., "bracketed" images) to yield a composite image with improved uniformity in exposure and tone. This is supposedly done by analyzing a set of bracketed images using a multi-dimensional histogram and merging the images via an approach that projects pixels onto a curve that fits the data (400-406). The desired composite image can also be produced by summing the pixel brightness levels across

the multiple images and followed by an equalization process (704), such as averaging the summed pixel brightness values by dividing the summed value of each pixel set (i.e., groups of corresponding pixels from the bracketed images) by the number of bracketed images. A better result can be achieved using a histogram equalization process (710-720). (See Szeliski, Abstract).

Accordingly, Szeliski does not describe or suggest the feature in which “the gray value density, which is a sum of frequencies of the gray values in an interval of gray values in reference to the interval of at least a part of the histogram of image signals from the at least one image sensor of the at least one part of the registered scene, is approximately constant,” as provided for in the context of each of claims 15, 22 and 28.

In particular, Szeliski refers to a histogram equalization process involving creation of a count of number of pixels sets having the same summed brightness level. From this count, a cumulative distribution function is computed and normalized to a maximum value corresponding to the maximum summed brightness level. (Szeliski, page 3, lines 20 to 24). The pixel set is made up of all the corresponding pixels from the bracketed images, where corresponding pixels are defined as pixels that represent the same portion of the depicted scene. (Szeliski, page 3, lines 13 to 16). Notably, bracketed images will mean a set of images captured at different exposure levels. (Szeliski, page 2, lines 4 to 5 and lines 14 to 17).

The Office Action apparently interprets the slope of the characteristic curve of Fig. 9A as the gray value density. (Office Action, page 4). According to the presently claimed subject matter, however, the gray value density designates the sum of frequencies of the gray values in an interval of gray values in reference to the interval. (Specification, page 6, lines 14 to 16). Figure 9A merely depicts a partial histogram equalization that is beneficial in that it can mitigate the effects of noise, as might be introduced by large areas of a single color in the images. (Szeliski, page 15, lines 12 to 15). One way of accomplishing the partial equalization is to blend the normalized cumulative distribution function with a straight line function referring to Fig. 9A.

In particular, the frequency of a gray value, in accordance with the presently claimed subject matter, designates the number of pixels within one camera image that have this gray value based on the total number of pixels. (Specification, page 6, lines 11 to 14). Thus, because the gray value density designates the sum of frequencies of the gray values in

an interval of gray values in reference to the interval, the gray value density is also referring to the gray value density of a single image. In contrast, according to Szeliski, the pixel set is made up of all the corresponding pixels from the bracketed images, where corresponding pixels are defined as pixels that represent the same portion of the depicted scene. (Szeliski, page 3, lines 13 to 16). Notably, bracketed images will mean a set of images captured at different exposure levels. (Szeliski, page 2, lines 4 to 5 and lines 14 to 17).

Thus, even if Szeliski might refer to counting the number of pixel sets having a plurality of bracketed images, this is wholly different than the presently claimed subject matter, in which the frequency of a gray value refers to number of pixels within a single camera image that have this gray value based on the total number of pixels, and the gray value density designates the sum of frequencies (i.e. the number of pixels within a single camera image) of the gray values in an interval of gray values in reference to the interval.

The Lin reference concerns a method of hue shift correction based on the extrema values of each channel, and exposure correction based on the median value of each channel. Nowhere does the Lin reference disclose the feature in which a gray value density, which is the sum of frequencies of the gray values in an interval of gray values in reference to the interval of at least a part of the histogram of image signals from the at least one image sensor of the least one part of the registered scene, is approximately constant.

Since the secondary Lin reference does not cure the critical deficiencies of the primary reference, claims 15, 22 and 28 are allowable, as are their respective dependent claims 16 to 21, 23 to 27 and 29 to 34.

As further regards all of the obviousness rejections, any Official Notice is respectfully traversed to the extent that it is maintained and it is requested that the Examiner provide specific evidence to establish those assertions and/or contentions that may be supported by the Official Notices under 37 C.F.R. § 1.104(d)(2) or otherwise. In particular, it is respectfully requested that the Examiner provide an affidavit and/or that the Examiner provide published information concerning these assertions. This is because the § 103 rejections are apparently being based on assertions that draw on facts within the personal knowledge of the Examiner, since no support was provided for these otherwise conclusory and unsupported assertions. (See also MPEP § 2144.03).

Accordingly, claims 15 to 34 are allowable.

CONCLUSION

It is therefore respectfully submitted that all of the presently pending claims are allowable. It is therefore respectfully requested that the rejections and objections be withdrawn, since all issues raised have been addressed and obviated. An early and favorable action on the merits is therefore respectfully requested.

Respectfully submitted,

Dated: _____

9/28/2009

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